Making a Chairmaker's Devil

by Scott Burr in Douglassville, PA

Here's the first one I made—cherry, mesquite clamping block. The throat's not quite deep enough—clogs up about half the time. And the radius is a little big for spindles. I'm about to start another with a ½" radius.

Greg Betit and John Jesseph have much more experience with these than do I, and I relied heavily upon Greg when making mine (thanks, Greg!), but here you are:

The escapement, or throat, is cut into the back of the clamping block. On the one I made, it's about 3⁄32" deep, which isn't quite enough, because it still chokes. An old one I picked up on eBay (the gull-winged one in the pictures) has an extremely fine throat which works very well on very fine shavings. But anything more than light stokes, and it, too, clogs. Also, on both devils that I have, the clamping block has some cracks near the screws. I think both are too thin for the stress they see. On the next iteration, I'll be using a thicker block, which will stand proud of the surface of the body, and will cut the escapement more like 1⁄8" to 5⁄32" deep. Also, I cut the escapement so that it's a little narrower than the radius at the bottom, and opens up toward the top. I think Greg has one (or more) that has a much wider mouth; I'll likely go wider on the next one.

The gull wing devil has a brass wear; my cherry one doesn't. Probably going against the grain here, but I don't really think the wear is that necessary, and I'll tell you why: when I use these, the scraper is sitting proud of the bottom of the body. By adjusting how far beyond the body it extends, I can control how aggressive a shaving it takes, and

the angle at which I have to hold the body. Set just so, the only thing touching the work is the scraper, or at most, the front edge of the clamping block. Since the body isn't riding on the work, the wear isn't really doing anything.

The cutter on my cherry devil is made from an old scraper. Cut it with some tin snips, filed the edges smooth, and rounded the corners with emery cloth. I set up the radius by first drilling the profile into the body and completing all the woodwork. Once the scraper's ready, I insert it into the body so it sits flush to the bottom edge, and trace the radius with an awl. I then remove the scraper and get busy with a Dremel. Work slowly, keep some water on hand for cooling (although, if memory serves, it really never heated up much) and grind away to the line. Goes surprisingly quickly. By the way, a Dremel's your friend with this. I cut the escapement with a Dremel and router attachment. You could use a backsaw and chisels, too, though.

Threaded inserts would work, provided you could find itty bitty teeny ones. Langsner's plan actually calls for insetting some nuts in the back of the body and attaching the clamping block with machine bolts. I used little machine screws, and generally torque them down too tight. Since the block's thin and unsupported at the edges, it's starting to crack a bit. Doesn't affect it's performance any, but I wish it didn't happen. Ideally, you could make the scraper full-width and cut little elongated holes for the screws so it could be adjusted up and down, and then the block would be supported across its entire width.